CR-Form-v7

CHANGE REQUEST

⌘	**25.423** CR **682**	⌘**rev** **3** ⌘	Current version:	**5.2.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐   ME ☐ Radio Access Network **X** Core Network ☐

Title:	⌘	CQI and ACK/NACK Repetition Factor and Power Offset and k-value

Source:	⌘	NEC

Work item code:	⌘	HSDPA-IubIur	**Date:**	⌘	19-23/08/2002

Category:	⌘	**F**		**Release:**	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can
be found in 3GPP TR 21.900.

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change:	⌘	During RAN3 #29 a joint meeting with RAN1 was held where it was clarified, that the CQI Feedback Cycle k and the CQI- and ACK-NACK Repetition Factors as well as CQI Power Offset, ACK Power Offset and NACK Power Offset are set as initial values by the SRNC. This deviates from what is currently specified in the Specification. The values of the IEs are definded according the proposals from RAN1 in the LS to RAN3 (R3-021828).

Summary of change:	⌘	Rev.3

- ASN.1 syntax errors are corrected (highlighted in yellow).

- ASN.1 is aligned with tabular (highlighted in green).

Rev.0, Rev.1and Rev.2
These changes are done:

- The *CQI Feedback Cycle k* IE is included in *HS-DSCH Information To Modify* IE and *HS-DSCH FDD Information* IE. It is removed from the HS-DSCH FDD Information Response.

- *CQI Repetition Factor* IE is included in *HS-DSCH Information To Modify* IE and *HS-DSCH FDD Information* IE. In *HS-DSCH FDD Information* IE it is conditional because it should only be signalled if the *CQI Feedback Cycle k* IE is set > 0.

- *ACK-NACK Repetition Factor* IE is included in *HS-DSCH Information To Modify* IE and *HS-DSCH FDD Information* IE.

- *ACK Power Offset* IE is included in *HS-DSCH Information To Modify* IE and

- *NACK Power Offset* IE is included in *HS-DSCH Information To Modify* IE and *HS-DSCH FDD Information* IE.

- *CQI Power Offset* IE is included in *HS-DSCH Information To Modify* IE and *HS-DSCH FDD Information* IE.

The procedure text of the RL RECONFIG PREPARATION procedure is also changed, to take the added optional parameters into account.

Impact Analysis:
Impact assessment towards the previous version of the specification (same release):

This CR has isolated impact with the previous version of the specification (same release) because it affects implementations supporting the corrected functionality of HS-DSCH setup and reconfiguration.

This CR has an impact under functional and protocol point of view.

The impact can be considered isolated because the change affects one function namely HSDPA.

Consequences if not approved:	⌘	If this CR is not approved the CQI processing cannot be configured correctly and the correct reception of the ACK-NACK can not be guaranteed.

Clauses affected:	⌘	8.3.4, 9.2.1.30Q, 9.2.2.19a, 9.2.2.19b, 9.2.2.24a, 9.2.2.x1, 9.2.2.x2, 9.3.4		

		Y	N			
Other specs affected:	⌘	X		Other core specifications	⌘	CR713 TS 25.433 v5.1.0
			X	Test specifications		
			X	O&M Specifications		

Other comments:	⌘	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3.4 Synchronised Radio Link Reconfiguration Preparation

8.3.4.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of Radio Link(s) related to one UE-UTRAN connection within a DRNS.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Synchronised Radio Link Reconfiguration Preparation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

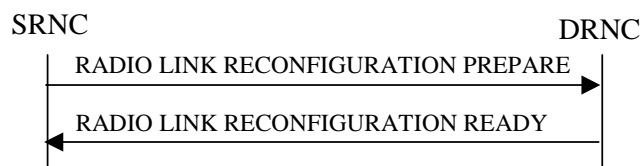### 8.3.4.2 Successful Operation

Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the DRNC.

Upon reception, the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allowed Queuing Time* IE the DRNS may queue the request the time corresponding to the value of the *Allowed Queuing Time* IE before starting to execute the request.

The DRNS shall prioritise resource allocation for the RL(s) to be modified according to Annex A.

DCH Modification:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs To Modify* IEs, the DRNS shall treat them each as follows:

-   If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCHs To Modify* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

-   If the *DCHs To Modify* IE includes the *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

-   If the *DCHs To Modify* IE includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

-   If the *DCHs To Modify* IE includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

-   If the *DCH Specific Info* IE includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

- If the *DCH Specific Info* IE includes the *Traffic Class* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The *Traffic Class* IE should be used to determine the transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs.

- If the *DCH Specific Info* IE includes the *Transport Format Set* IE for the UL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

- If the *DCH Specific Info* IE includes the *Transport Format Set* IE for the DL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

- [FDD - If, in the *DCH Specific Info* IE, the *DRAC Control* IE is present and set to "requested" for at least one DCH and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE for the FACH where the DRAC information is sent, for each Radio Link established in a cell where DRAC is active. If the DRNS does not support DRAC, DRNC shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

- [TDD - If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCTrCH.]

- [TDD - If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCTrCH.]

- If the *DCH Specific Info* IE includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:

    - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate in the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.

      If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate in the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs To Add* IEs, the DRNS shall treat them each as follows:

- The DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

- If the *DCHs To Add* IE includes a *DCHs To Add* IE with multiple *DCH Specific Info* IEs, the DRNS shall treat the DCHs in the *DCHs To Add* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

- [FDD - For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If the *QE-Selector* IE is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [4].]

- [FDD - For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" shall be used for the QE in the UL data frames, ref. [4]. [FDD - If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If all DCHs have the *QE-Selector* IE set to "non-selected" the Physical channel BER shall be used for the QE, ref. [4].]

- The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

- The DRNS should store the *Traffic Class* IE received for a DCH to be added in the new configuration. The *Traffic Class* IE should be used to determine the transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs.

- The DRNS shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- [TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if at least one DSCH or USCH exists in the new configuration.]

- [FDD - If the *DRAC Control* IE is set to "requested" in the *DCH Specific Info* IE for at least one DCH and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE for the FACH where the DRAC information is sent, for each Radio Link supported by a cell where DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

- If the *DCH Specific Info* IE includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:

  - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed UL Rate* IE, the DRNS shall not limit the user rate of the downlink of the DCH.

  - If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed DL Rate* IE, the DRNS shall not limit the user rate of the uplink of the DCH.

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCH To Delete*, the DRNS shall not include the referenced DCHs in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration.

Physical Channel Modification:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *UL DPCH Information* IE, the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD - If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *Min UL Channelisation Code Length* IE, the DRNS shall apply the new Min UL Channelisation Code Length in the new configuration. The DRNS shall apply the contents of the *Max Number of UL DPDCHs* IE (if it is included) in the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *TFCS* IE, the DRNS shall use the *TFCS* IE for the UL when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *UL DPCCH Slot Format* IE, the DRNS shall apply the new Uplink DPCCH *Slot Format* to the new configuration.]

- [FDD – If the *UL DPCH Information* IE includes the *UL SIR Target* IE, the DRNS shall set the UL inner loop power control to the UL SIR target when the new configuration is being used.]

- [FDD – If the *UL DPCH Information* IE includes the *Puncture Limit* IE, the DRNS shall apply the value in the uplink of the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the DRNS shall apply diversity according to the given value.]

- [FDD – If the *UL DPCH Information* IE includes an *SSDT Cell Identity Length* IE and/or an *S-Field Length* IE, the DRNS shall apply the values in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL DPCH Information* IE, the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD - If the *DL DPCH Information* IE includes *Number of DL Channelisation Codes* IE*,* the DRNS shall allocate given number of Downlink Channelisation Codes per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a FDD DL Channelisation Code Number IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC. If some Transmission Gap Pattern sequences using 'SF/2' method are already initialised in the DRNS, DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the RADIO LINK RECONFIGURATION READY message in case the DRNS selects to change the Scrambling code change method for one or more DL Channelisation Code.]

- [FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When *p* number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2"*, and so on until the *p*th to "*PhCH number p*".]

- [FDD - If the *DL DPCH Information* IE includes the *TFCS* IE, the DRNS shall use the *TFCS* IE for the DL when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *DL DPCH Slot Format* IE, the DRNS shall apply the new slot format used in DPCH in DL.]

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE, the DRNS shall apply the new signalling mode of the TFCI.]

- [FDD – If the *DL DPCH Information* IE includes the *Multiplexing Position* IE, the DRNS shall apply the new parameter to define whether fixed or flexible positions of transport channels shall be used in the physical channel.]

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE set to "Used", the DRNS shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IEset to "Not Used", the DRNS shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]

- [FDD – If the RADIO LINK RECONFIGURATION PREPARE message does not include the *Length of TFCI2* IE and the *Split type* IE is present with the value "Hard", then the DRNS shall assume the length of the TFCI (field 2) is 5 bits.]

- [FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes *Split Ty*pe IE, then the DRNS shall apply this information to the new configuration of TFCI.]

- [FDD – If the *DL DPCH Information* IE includes the *Length of TFCI2* IE, the DRNS shall apply this information to the length of TFCI(field 2) in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration. This new Compressed Mode Configuration shall be valid in the DRNS until the next Compressed Mode Configuration is configured in the DRNS or last Radio Link is deleted.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE and the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence within the *Transmission Gap Pattern Sequence Information* IE is set to 'SF/2', the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE to the RADIO LINK RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not].

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH To Modify* IEs or *DL CCTrCH To Modify* IEs, then the DRNS shall treat them each as follows:]

[TDD - If any of the *UL CCTrCH To Modify* IEs or *DL CCTrCH To Modify* IEs includes any of the *TFCS* IE, *TFCI coding* IE, *Puncture limit* IE, or *TPC CCTrCH ID* IEs the DRNS shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

- [TDD – The DRNC shall include in the RADIO LINK RECONFIGURATION READY message DPCH information to be modified and the IEs modified if any of *Repetition Period* IE, *Repetition Length* IE, *TDD DPCH Offset* IE or timeslot information was modified. The DRNC shall include timeslot information and the IEs modified if any of *[3.84Mcps TDD - Midamble Shift And Burst Type* IE, *Time Slot* IE], [1.28Mcps TDD - *Midamble Shift LCR* IE, *Time Slot LCR* IE], *TFCI Presence* IE or Code information was modified. The DRNC shall include code information if [3.84Mcps TDD - *TDD Channelisation Code* IE] and/or [1.28Mcps TDD - *TDD Channelisation Code LCR* IE] was modified.]

- [1.28Mcps TDD – If the *UL CCTrCH To Modify* IE includes the *UL SIR Target* IE, the DRNS shall use the value for the UL inner loop power control according [12] and [22] when the new configuration is being used.]

[TDD – UL/DL CCTrCH Addition]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH To Add* IEs or *DL CCTrCH To Add* IEs, the DRNS shall include this CCTrCH in the new configuration.]

[TDD – If the DRNS has reserved the required resources for any requested DPCHs, the DRNC shall include the DPCH information within DPCH to be added in the RADIO LINK RECONFIGURATION READY message. [3.84Mcps TDD - If no DPCH was active before the reconfiguration, and if a valid Rx Timing Deviation measurement is known in DRNC, then the DRNC shall include the *Rx Timing Deviation* IE in the RADIO LINK RECONFIGURATION READY message.]]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL CCTrCH To Add* IE, the DRNS shall set the TPC step size of that CCTrCH to the same value as the lowest numbered DL CCTrCH in the current configuration.]

[1.28Mcps TDD – The DRNS shall use the *UL SIR Target* IE in the *UL CCTrCH To Add* IE as the UL SIR value for the inner loop power control for this CCTrCH according [12] and [22] in the new configuration.]

[TDD – UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH To Delete* IEs *or DL CCTrCH To Delete* IEs, the DRNS shall remove this CCTrCH in the new configuration.]

SSDT Activation/Deactivation:

- [FDD - If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS shall activate SSDT, if supported, using the *SSDT Cell Identity* IE in *RL Information* IE, and the *SSDT Cell Identity Length* IE in *UL DPCH Information* IE, in the new configuration.]

- [FDD - If the *RL Information* IE includes the *Qth Parameter* IE and the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS shall use the *Qth Parameter* IE, if Qth signalling is supported, when SSDT is activated in the new configuration.]

- [FDD - If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

DL Power Control:

- [FDD - If the *RL Information* IE includes the *DL Reference Power* IEs and power balancing is active, DRNS shall update the reference power of the power balancing in the indicated RL(s), if updating of power balancing parameters by the RADIO LINK RECONFIGURATION PREPARE message is supported, at the CFN in the RADIO LINK RECONFIGURATION COMMIT message, according to subclause 8.3.15, using the *DL Reference Power* IE. If the CFN modulo the value of the *Adjustment Period* IE is not equal to 0, the power balancing continues with the old reference power until the end of the current adjustment period, and the updated reference power shall be used from the next adjustment period.

[FDD - If updating of power balancing parameters by the RADIO LINK RECONFIGURATION PREPARE message is supported by the DRNS, the DRNC shall include the *DL Power Balancing Updated Indicator* IE in the *RL Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]

DSCH Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add*, *DSCH To Modify* or *DSCH To Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated DSCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add* IE, then the DRNS shall use the *Allocation/Retention Priority* IE*, Scheduling Priority Indicator* IE and *TrCH Source Statistics Descriptor* IE to define a set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add* IE, then the DRNS may use the *Traffic Class* IE to determine the transport bearer characteristics to apply between DRNC and Node B for the related DSCHs.

[FDD - If the *DSCHs To Add* IE includes the *Enhanced DSCH PC* IE, the DRNS shall activate enhanced DSCH power control in accordance with ref. [10] subclause 5.2.2, if supported, using either:]

- [FDD - the *SSDT Cell Identity for EDSCHPC* IE in the *RL Information* IE, if the *SSDT Cell Identity* IE is not included in the *RL Information* IE or]

- [FDD - the *SSDT Cell Identity* IE in the *RL Information* IE, if both the *SSDT Cell Identity* IE and the *SSDT Cell Identity for EDSCHPC* are included in the *RL Information* IE.]

[FDD - together with the *SSDT Cell Identity Length* IE in *UL DPCH Information* IE, and *Enhanced DSCH PC* IE, in the new configuration.]

[FDD - If the enhanced DSCH power control is activated and the TFCI PC Mode 2 is supported, the primary/secondary status determination in the enhanced DSCH power control shall be applied to the TFCI power control in DSCH hard split mode.]

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Modify* IE, then the DRNS shall treat them each as follows:

- [FDD – If the *DSCH To Modify* IE includes any *DSCH Info* IEs, then the DRNS shall treat them each as follows:]

  - [FDD – If the *DSCH Info* IE includes any of the *Allocation/Retention Priority* IE*, Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DRNS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]

- [FDD – If the *DSCH Info* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]

- [FDD – If the DSCH Info IE includes the *Traffic Class* IE, the DRNS may use this information to determine the transport bearer characteristics to apply between DRNC and Node B for the related DSCHs.]

- [FDD – If the *DSCH To Modify* IE includes the *PDSCH RL ID* IE, then the DRNS shall use it as the new DSCH RL identifier.]

- [FDD - If the indicated PDSCH RL ID is in the DRNS and there was no DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.]

- [FDD - If the indicated PDSCH RL ID is in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a new DSCH-RNTI to the UE Context, release the old DSCH-RNTI and include the *DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.]

- [FDD - If the indicated PDSCH RL ID is not in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall release this DSCH-RNTI.]

- [FDD – If the *DSCH To Modify* IE includes the *Transport Format Combination Set* IE, then the DRNS shall use it as the new Transport Format Combination Set associated with the DSCH.]

- [TDD – If the *DSCHs To Modify* IE includes the *CCTrCH Id* IE, then the DRNS shall map the DSCH onto the referenced DL CCTrCH.]

- [TDD – If the *DSCHs To Modify* IE includes any of the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DNRS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]

- [TDD – If the *DSCHs To Modify* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]

- [TDD – If the *DSCHs To Modify* IE includes the *Traffic Class* IE, the DRNS may use this information to determine the transport bearer characteristics to apply between DRNC and Node B for the related DSCHs.]

- [TDD – The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if a DSCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

- [FDD - If the *DSCHs To Modify* IE includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC Active in the UE ", the DRNS shall activate enhanced DSCH power control in accordance with ref. [10] subclause 5.2.2, if supported, using either:]

    - [FDD - the *SSDT Cell Identity for EDSCHPC* IE in *RL Information* IE, if the *SSDT Cell Identity* IE is not included in the *RL Information* IE or]

    - [FDD - the *SSDT Cell Identity* IE in the *RL Information* IE, if both the *SSDT Cell Identity* IE and the *SSDT Cell Identity for EDSCHPC* are included in the *RL Information* IE.]

    [FDD - together with the *SSDT Cell Identity Length* IE in *UL DPCH Information* IE, and *Enhanced DSCH PC* IE, in the new configuration.]

- [FDD - If the *DSCHs To Modify* IE includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC not Active in the UE", the DRNS shall deactivate enhanced DSCH power control in the new configuration.]

    [FDD - If the enhanced DSCH power control is activated and the TFCI PC Mode 2 is supported, the primary/secondary status determination in the enhanced DSCH power control shall be applied to the TFCI power control in DSCH hard split mode.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a *DSCHs To Delete* IE requesting the deletion of all DSCH resources for the UE Context, then the DRNC shall release the DSCH-RNTI allocated to the UE Context, if there was one.]

If the requested modifications are allowed by the DRNS and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

[TDD] USCH Addition/Modification/Deletion

If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Modify*, *USCH To Add* or *USCH To Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Add* IE, then, the DRNS shall use the *Allocation/Retention Priority* IE*, Scheduling Priority Indicator* IE and *TrCH Source Statistics Descriptor* IE to define a set of USCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Add* IE, then the DRNS may use the *Traffic Class* IE to determine the transport bearer characteristics to apply between DRNC and Node B for the related USCHs.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Modify* IE, then the DRNS shall treat them each as follows:

- If the *USCH To Modify* IE includes any of the Allocation/Retention Priority IE , Scheduling Priority Indicator IE or TrCH Source Statistics Descriptor IE, the DNRS shall use them to update the set of USCH Priority classes.

- If the *USCH To Modify* IE includes any of the CCTrCH Id IE, Transport Format Set IE, BLER IE or RB Info IE, the DRNS shall apply the parameters to the new configuration.

- If the *USCHs To Modify* IE includes the *Traffic Class* IE, the DRNS may use this information to determine the transport bearer characteristics to apply between DRNC and Node B for the related USCHs.

- [TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if a USCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

If the requested modifications are allowed by the DRNC and the DRNC has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

RL Information:

[FDD- If the *RL Information* IE includes the *DL DPCH Timing Adjustment* IE, the DRNS shall adjust the timing of the radio link accordingly in the new configuration.]

HS-DSCH Information Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *HS-DSCH Information To Modify*, *HS-DSCH Information To Add* or *HS-DSCH Information to Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated HS-DSCH resources to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-PDSCH RL ID* IE, then:

- If the indicated HS-PDSCH RL ID is in the DRNS and there was no HS-DSCH-RNTI allocated to the UE Context, the DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.

- If the indicated HS-PDSCH RL ID is in the DRNS and there was an HS-DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a new HS-DSCH-RNTI to the UE Context, release the old HS-DSCH-RNTI and include the *HS-DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.

- If the indicated HS-PDSCH RL ID is not in the DRNS and there was an HS-DSCH-RNTI allocated to the UE Context, the DRNC shall release this HS-DSCH-RNTI.

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the ~~Measurement Reporting~~*CQI Feedback Cycle k* IE, the *CQI Repetition Factor* IE , the *ACK-NACK Repetiton Factor* IE, *the ACK Power Offset* IE, the *NACK Power Offset* IE or~~and~~ the *CQI Power Offset* IE in the *HS-DSCH Information To Modify* IE, then the DRNS shall use the indicated ~~Measurement~~CQI Feedback ~~Reporting~~ Cycle k value, the CQI Repetition Factor or~~and~~ the ACK-NACK Repetition Factor, ACK Power Offset, the NACK Power Offset or~~and~~ the CQI Power Offset in the new configuration.]

General

If the RADIO LINK RECONFIGURATION PREPARE message includes an *HS-DSCH Information to Delete* IE requesting the deletion of all HS-DSCH resources for the UE Context, then the DRNC shall release the HS-DSCH-RNTI allocated to the UE Context, if there was one.

The DRNC shall include the *HS-DSCH Initial Capacity Allocation* IE in the RADIO LINK RECONFIGURATION READY message for each MAC-d flow, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32].

[TDD] DSCH RNTI Addition/Deletion

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the PDSCH RL ID IE, then the DRNS shall use it as the new RL identifier for PDSCH and PUSCH..]

- [TDD - If the indicated PDSCH RL ID is in the DRNS and there was no DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a DSCH-RNTI to the UE Context and include the DSCH-RNTI IE in the RADIO LINK RECONFIGURATION READY message.]

- [TDD - If the indicated PDSCH RL ID is in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a new DSCH-RNTI to the UE Context, release the old DSCH-RNTI and include the DSCH-RNTI IE in the RADIO LINK RECONFIGURATION READY message.]

- [TDD - If the indicated PDSCH RL ID is not in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall release this DSCH-RNTI.]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a DSCHs to Delete IE and/or a USCHs to Delete IE which results in the deletion of all DSCH and USCH resources for the UE Context, then the DRNC shall release the DSCH-RNTI allocated to the UE Context, if there was one.]

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Layer Address* IE and *Binding ID* IE in the *DSCHs To Modify* , *DSCHs To Add*, [TDD - *USCHs To Modify* , *USCHs To Add*], *HS-DSCH To Modify*, *HS-DSCH To Add* or in the *RL Specific DCH Information* IEs, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

The DRNS shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iur interface, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the DRNS, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included only for one of the combined Radio Links.

Any allowed rate for the uplink of a DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include the *Allowed UL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK RECONFIGURATION READY message for this Radio Link.

Any allowed rate for the downlink of a DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall

include the *Allowed DL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK RECONFIGURATION READY message for this Radio Link.

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there exists a Prepared Reconfiguration, as defined in subclause 3.1.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink SIR* IE and *Minimum Uplink SIR* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

If the DL TX power upper or lower limit has been re-configured the DRNC shall return this in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE respectively in the RADIO LINK RECONFIGURATION READY message. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH of the RL [FDD – except during compressed mode, when the $P_{SIR}(k)$, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power in slot k.]

[TDD - If the *Primary CCPCH RSCP* IE and/or the [3.84Mcps TDD - *DL Time Slot ISCP Info* IE][1.28Mcps TDD - *DL Time Slot ISCP Info LCR* IE] are present, the DRNC should use the indicated values when deciding the Initial DL TX Power.]

/*Partly omitted*/

9.2.1.30Q   HS-DSCH Information To Modify

The *HS-DSCH Information To Modify* IE provides information for HS-DSCH to be modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
HS-DSCH MAC-d Flow Specific Information		*0..<maxnoofMACdFlows>*			–	
>HS-DSCH MAC-d Flow ID	M		9.2.1.30O		–	
>BLER	O		9.2.1.4		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishment with ALCAP.	–	
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishment with ALCAP.	–	
>Priority Queue Information		*0..<maxnoofPrioQueues>*			–	
>>Priority Queue ID	M		9.2.1.45A		–	
>>Scheduling Priority Indicator	O		9.2.1.51A		–	
>>MAC-d PDU Size Index		*0..<maxnoofMACdPDUindexes>*			–	
>>>SID	M		9.2.1.52D		–	
>>>MAC-d PDU Size	O		9.2.1.34A		–	
~~Measurement Reporting Cycle~~	~~O~~		~~ENUMERATED(k1,k2)~~	~~For FDD only~~	**–**	
CQI Feedback Cycle k	O		9.2.2.24a	For FDD only	–	
CQI Repetition Factor	O		9.2.2.x1	For FDD only	–	
ACK-NACK Repetition Factor	O		9.2.2.x2	For FDD only	–	
CQI Power Offset	O		9.2.2.x3	For FDD only	–	
ACK Power Offset	O		9.2.2.x4	For FDD only	–	
NACK Power Offset	O		9.2.2.x5	For FDD only	–	

Range bound	Explanation
maxnoofMACdFlows	Maximum number of MAC-d flows.
maxnoofPrioQueues	Maximum number of Priority Queues.
maxnoofMACdPDUindexes	Maximum number of MAC-d PDU Size Indexes (SIDs).

/*Partly omitted*/

9.2.2.19a   HS-DSCH FDD Information

The *HS-DSCH FDD Information* IE provides information for HS-DSCH MAC-d flows to be established.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
HS-DSCH MAC-d Flow Specific Information		*1..<maxno ofMACdFl ows>*			–	
>HS-DSCH MAC-d Flow ID	M		9.2.1.30O		–	
>BLER	M		9.2.1.4		–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishme nt with ALCAP.	–	
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishme nt with ALCAP.	–	
>Priority Queue Information		*1..<maxno ofPrioQue ues>*			=	
>>Priority Queue ID	M		9.2.1.45A		=	
>>Scheduling Priority Indicator	M		9.2.1.51A		=	
>>MAC-d PDU Size Index		*1..<maxno ofMACdP DUindexes >*			=	
>>>SID	M		9.2.1.52D		=	
>>>MAC-d PDU Size	M		9.2.1.34A		=	
UE Capabilities information		*1*			=	
>HS-DSCH TrCh Bits per HS-DSCH TTI	M		ENUMERA TED (7300, 14600, 20456, 28800,…)		=	
>HS-DSCH multi-code capability	M		ENUMERA TED (5, 10, 15,…)		=	
>Min Inter-TTI Interval	M		INTEGER (1..3,…)		=	
>MAC-hs reordering buffer size	M		INTEGER (1..300,…)	The total buffer size defined in UE capability minus the RLC AM buffer	=	
HARQ Information		*1..<maxno ofHARQpr ocesses>*			–	
>Process memory size	M		INTEGER (1..172800, …)	Number of soft channel bits per process.	=	
~~Measurement feedback offset~~	~~M~~		~~INTEGER (0..79,…)~~			
CQI Feedback Cycle k	M		9.2.2.24a		=	
CQI Repetition Factor	C-CQICyclek		9.2.2.x1		=	
ACK-NACK Repetition Factor	M		9.2.2.x2		=	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CQI Power Offset	M		9.2.2.x3		–	
ACK Power Offset	M		9.2.2.x4		–	
NACK Power Offset	M		9.2.2.x5		–	

Condition	Explanation
CQICyclek	The IE shall be present if the *CQI Feedback Cycle k* IE is set to a value greater than 0.

Range bound	Explanation
maxnoofMACdFlows	Maximum number of MAC-d flows.
maxnoofPrioQueues	Maximum number of Priority Queues.
maxnoofMACdPDUindexes	Maximum number of MAC-d PDU Size Indexes (SIDs).
maxnoofHARQprocesses	Maximum number of HARQ processes.

9.2.2.19b HS-DSCH FDD Information Response

The *HS-DSCH FDD Information Response* IE provides information for HS-DSCH MAC-d flows that have been established or modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
HS-DSCH MAC-d Flow Specific Information Response		*1..<maxnoofMACdFlows>*			–	
>HS-DSCH MAC-d Flow ID	M		9.2.1.30O		–	
>Binding ID	O		9.2.1.3		–	
>Transport Layer Address	O		9.2.1.62		–	
>HS-DSCH Initial Capacity Allocation	O		9.2.1.30Na		–	
HS-SCCH Specific Information Response		*1..<maxnoofHSSCCHcodes>*			–	
>Code Number	M		INTEGER(0..127)		–	
Measurement feedback reporting cycle k1	M		Measurement Feedback Reporting Cycle 9.2.2.24a	used by the UE when not in soft handover		
Measurement feedback reporting cycle k2	M		Measurement Feedback Reporting Cycle 9.2.2.24a	used by the UE when in soft handover		

Range bound	Explanation
maxnoofMACdFlows	Maximum number of MAC-d flows.
maxnoofHSSCCHcodes	Maximum number of HS-SCCH codes.

/*Partly omitted*/

9.2.2.24a   CQIMeasurement Feedback Reporting Cycle k

The *CQIMeasurement Feedback Reporting Cycle k* IE provides the duration of the CQImeasurement feedback reporting cycle.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CQIMeasurement Feedback Reporting Cycle k			ENUMERATED (0, 1, 5, 10, 20, 40, 80,…)	Multiples of 2 ms intervals;

/*Partly omitted*/

9.2.2.x1   CQI Repetition Factor

The *CQI Repetition Factor* IE indicates the consecutive repetition of the CQI.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CQI Repetition Factor			INTEGER (1..,4,...)	Step: 1

9.2.2.x2   ACK-NACK Repetition Factor

The *ACK-NACK Repetition Factor* IE indicates the consecutive repetition of the ACK and NACK.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ACK-NACK Repetition Factor			INTEGER (1..,4,...)	Step: 1

9.2.2.x3   CQI Power Offset

The *CQI Power Offset* IE indicates Power offset used in the UL between the HS-DPCCH slots carrying CQI information and the associated DPCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CQI Power Offset			INTEGER (-10..6,…)	Unit dB, Step: 2 dB

9.2.2.x4   ACK Power Offset

The *ACK Power Offset* IE indicates Power offset used in the UL between the HS-DPCCH slot carrying HARQ ACK information and the associated DPCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ACK Power Offset			INTEGER (-10..6,…)	Unit dB, Step: 2 dB

9.2.2.x5　　　NACK Power Offset

The *NACK Power Offset* IE indicates Power offset used in the UL between the HS-DPCCH slot carrying HARQ NACK information and the associated DPCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
NACK Power Offset			INTEGER (-10..6,…)	Unit dB, Step: 2 dB

/*Partly omitted*/

9.3.4   Information Element Definitions

```
-- *************************************************************
--
-- Information Element Definitions
--
-- *************************************************************
```

/*Partly omitted*/

```
-- A

AckNack-RepetitionFactor ::= INTEGER (1..4,...)
-- Step: 1

Ack-Power-Offset ::= INTEGER (-10..6,...)
-- Unit dB, Step: 2 dB
```

/*Partly omitted*/

```
-- C
```

/*Partly omitted*/

```
CQI-Feedback-Cycle ::= ENUMERATED {v0, v1, v5, v10, v20, v40, v80,...}

CQI-Power-Offset ::= INTEGER(-10..6,...)
-- Unit dB, Step: 2 dB

CQI-RepetitionFactor ::= INTEGER (1..4,...)
-- Step: 1
```

/*Partly omitted*/

```
-- H

HARQ-FDD-InfoList ::= SEQUENCE (SIZE (1..maxNrOfHARQProc)) OF HARQ-FDD-InfoItem

HARQ-FDD-InfoItem ::= SEQUENCE {
    process-Memory-Size             INTEGER (1..172800,...),
    iE-Extensions                   ProtocolExtensionContainer { { HARQ-FDD-InfoItem-ExtIEs } }    OPTIONAL,
```

```
    ...
}

HARQ-FDD-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HARQ-TDD-InfoList ::= SEQUENCE (SIZE (1..maxNrOfHARQProc)) OF HARQ-TDD-InfoItem

HARQ-TDD-InfoItem ::= SEQUENCE {
    process-Memory-Size             INTEGER (1..168960,...),
    iE-Extensions                   ProtocolExtensionContainer  { { HARQ-TDD-InfoItem-ExtIEs } }     OPTIONAL,
    ...
}

HARQ-TDD-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HCS-Prio    ::= INTEGER (0..7)
-- 0 = lowest priority, ...7 = highest priority

HSDSCH-FDD-Information ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-Info        HSDSCH-MACdFlow-Specific-InfoList,
    uE-Capabilities-InfoFDD              UE-Capabilities-InfoFDD,
    hARQ-FDD-Info                        HARQ-FDD-InfoList,
    measurement-Feedback-Offset          Measurement-Feedback-Offset,
    cqiFeedback-CycleK                   CQI-Feedback-Cycle,
    cqiRepetitionFactor                  CQI-RepetitionFactor,               OPTIONAL,
-- This IE shall be present if the CQI Feedback Cycle k is greater than 0
    ackNackRepetitionFactor             AckNack-RepetitionFactor,
    cqiPowerOffset                       CQI-Power-Offset,
    ackPowerOffset                       Ack-Power-Offset,
    nackPowerOffset                      Nack-Power-Offset,
    iE-Extensions                        ProtocolExtensionContainer { { HSDSCH-FDD-Information-ExtIEs } }     OPTIONAL,
    ...
}

HSDSCH-FDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-FDD-Information-Response ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-InfoList-Response        HSDSCH-MACdFlow-Specific-InfoList-Response,
    hSSCCH-Specific-InfoList-Response                 HSSCCH-FDD-Specific-InfoList-Response,
    measurement-Feedback-Reporting-Cycle-k1           Measurement-Feedback-Reporting-Cycle,
    measurement-Feedback-Reporting-Cycle-k2           Measurement-Feedback-Reporting-Cycle,
    iE-Extensions                                     ProtocolExtensionContainer { { HSDSCH-FDD-Information-Response-ExtIEs } }     OPTIONAL,
    ...
}

HSDSCH-FDD-Information-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

HSDSCH-Information-to-Modify ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-InfoList-to-Modify     HSDSCH-MACdFlow-Specific-InfoList-to-Modify     OPTIONAL,
    measurement-Reporting-Cycle                     ENUMERATED {k1, k2}                             OPTIONAL,
    -- Only for FDD
    cqiFeedback-CycleK                              CQI-Feedback-Cycle      OPTIONAL,       -- For FDD only
    cqiRepetitionFactor                             CQI-RepetitionFactor    OPTIONAL,       -- For FDD only
    ackNackRepetitionFactor                         AckNack-RepetitionFactor OPTIONAL,      -- For FDD only
    cqiPowerOffset                                  CQI-Power-Offset        OPTIONAL,       -- For FDD only
    ackPowerOffset                                  Ack-Power-Offset        OPTIONAL,       -- For FDD only
    nackPowerOffset                                 Nack-Power-Offset       OPTIONAL,       -- For FDD only

    iE-Extensions           ProtocolExtensionContainer { { HSDSCH-Information-to-Modify-ExtIEs } }     OPTIONAL,
    ...
}

HSDSCH-Information-to-Modify-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-MACdFlow-ID ::= INTEGER (0..maxNrOfMACdFlows-1)

HSDSCH-MACdFlow-Specific-InfoList ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InfoItem

HSDSCH-MACdFlow-Specific-InfoItem ::= SEQUENCE {
    hSDSCH-MACdFlow-ID              HSDSCH-MACdFlow-ID,
    bLER,                          BLER,
    allocationRetentionPriority    AllocationRetentionPriority,
    bindingID                      BindingID                       OPTIONAL,
    transportLayerAddress          TransportLayerAddress           OPTIONAL,
    priorityQueue-Info             PriorityQueue-InfoList,
    iE-Extensions                  ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-ExtIEs } }     OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-MACdFlow-Specific-InfoList-Response ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InfoItem-Response

HSDSCH-MACdFlow-Specific-InfoItem-Response ::= SEQUENCE {
    hSDSCH-MACdFlow-ID                 HSDSCH-MACdFlow-ID,
    bindingID                          BindingID                       OPTIONAL,
    transportLayerAddress              TransportLayerAddress           OPTIONAL,
    hSDSCH-Initial-Capacity-Allocation HSDSCH-Initial-Capacity-Allocation OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-Response-ExtIEs } }     OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InfoItem-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

HSDSCH-MACdFlow-Specific-InfoList-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InfoItem-to-Modify

HSDSCH-MACdFlow-Specific-InfoItem-to-Modify ::= SEQUENCE {
    hSDSCH-MACdFlow-ID            HSDSCH-MACdFlow-ID,
    bLER                         BLER                            OPTIONAL,
    allocationRetentionPriority  AllocationRetentionPriority     OPTIONAL,
    transportBearerRequestIndicator  TransportBearerRequestIndicator,
    bindingID                    BindingID                       OPTIONAL,
    transportLayerAddress        TransportLayerAddress           OPTIONAL,
    priorityQueue-Info-to-Modify PriorityQueue-InfoList-to-Modify  OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-to-Modify-ExtIEs } }  OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InfoItem-to-Modify-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-Initial-Capacity-Allocation::= SEQUENCE (SIZE (1..16)) OF HSDSCH-Initial-Capacity-AllocationItem

HSDSCH-Initial-Capacity-AllocationItem ::= SEQUENCE {
    schedulingPriorityIndicator  SchedulingPriorityIndicator,
    maximum-MACdPDU-Size         MACdPDU-Size,
    hSDSCH-InitialWindowSize     HSDSCH-InitialWindowSize,
    iE-Extensions                ProtocolExtensionContainer { {HSDSCH-Initial-Capacity-AllocationItem-ExtIEs} }  OPTIONAL,
    ...
}

HSDSCH-Initial-Capacity-AllocationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-InitialWindowSize           ::= INTEGER (1..2047)
-- Number of MAC-d PDUs.
-- 2047 = Unlimited number of MAC-d PDUs

HSDSCH-RNTI ::= INTEGER (0..65535)

HSDSCH-TDD-Information ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-Info  HSDSCH-MACdFlow-Specific-InfoList,
    uE-Capabilities-InfoTDD        UE-Capabilities-InfoTDD,
    hARQ-TDD-InfoList              HARQ-TDD-InfoList,
    iE-Extensions                 ProtocolExtensionContainer { { HSDSCH-TDD-Information-ExtIEs } }  OPTIONAL,
    ...
}

HSDSCH-TDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-TDD-Information-Response ::= SEQUENCE {
```

```
hSDSCH-MACdFlow-Specific-InfoList-Response      HSDSCH-MACdFlow-Specific-InfoList-Response,
hSSCCH-TDD-Specific-InfoList-Response           HSSCCH-TDD-Specific-InfoList-Response               OPTIONAL,
hSSCCH-TDD-Specific-InfoList-Response-LCR        HSSCCH-TDD-Specific-InfoList-Response-LCR           OPTIONAL,
iE-Extensions                                   ProtocolExtensionContainer { { HSDSCH-TDD-Information-Response-ExtIEs } }      OPTIONAL,
...
}

HSDSCH-TDD-Information-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

HSSCCH-FDD-Specific-InfoList-Response ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-FDD-Specific-InfoItem-Response

HSSCCH-FDD-Specific-InfoItem-Response ::= SEQUENCE {
code-Number                                     INTEGER (0..127),
iE-Extensions                                   ProtocolExtensionContainer { { HSSCCH-FDD-Specific-InfoItem-Response-ExtIEs } }      OPTIONAL,
...
}

HSSCCH-FDD-Specific-InfoItem-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

HSSCCH-TDD-Specific-InfoList-Response ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-TDD-Specific-InfoItem-Response

HSSCCH-TDD-Specific-InfoItem-Response ::= SEQUENCE {
timeslot                                        TimeSlot,
midambleShiftAndBurstType                       MidambleShiftAndBurstType,
tDD-ChannelisationCode                          TDD-ChannelisationCode,
hSSICH-Info                                     HSSICH-Info,
iE-Extensions                                   ProtocolExtensionContainer { { HSSCCH-TDD-Specific-InfoItem-Response-ExtIEs } }      OPTIONAL,
...
}

HSSCCH-TDD-Specific-InfoItem-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

HSSCCH-TDD-Specific-InfoList-Response-LCR ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-TDD-Specific-InfoItem-Response-LCR

HSSCCH-TDD-Specific-InfoItem-Response-LCR ::= SEQUENCE {
timeslotLCR                                     TimeSlotLCR,
midambleShiftLCR                                MidambleShiftLCR,
tDD-ChannelisationCodeLCR                       TDD-ChannelisationCodeLCR,
hSSICH-InfoLCR                                  HSSICH-InfoLCR,
iE-Extensions                                   ProtocolExtensionContainer { { HSSCCH-TDD-Specific-InfoItem-Response-LCR-ExtIEs } }      OPTIONAL,
...
}

HSSCCH-TDD-Specific-InfoItem-Response-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
```

```
HSSICH-Info ::= SEQUENCE {
    timeslot                        TimeSlot,
    midambleShiftAndBurstType       MidambleShiftAndBurstType,
    tDD-ChannelisationCode          TDD-ChannelisationCode,
    iE-Extensions                   ProtocolExtensionContainer { { HSSICH-Info-ExtIEs } }    OPTIONAL,
    ...
}

HSSICH-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSICH-InfoLCR ::= SEQUENCE {
    timeslotLCR                     TimeSlotLCR,
    midambleShiftLCR                MidambleShiftLCR,
    tDD-ChannelisationCodeLCR       TDD-ChannelisationCodeLCR,
    iE-Extensions                   ProtocolExtensionContainer { { HSSICH-Info-LCR-ExtIEs } }    OPTIONAL,
    ...
}

HSSICH-Info-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

/*Partly omitted*/

-- M

/*Partly omitted*/

```
Measurement-Feedback-Reporting-Cycle ::= ENUMERATED {
    v0,
    v1,
    v5,
    v10,
    v20,
    v40,
    v80,
    ...
}
```

/*Partly omitted*/

-- N

/*Partly omitted*/

```
Nack-Power-Offset ::= INTEGER (-10..6,...)
-- Unit dB, Step: 2 dB
```

/*Partly omitted*